Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 10 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

Remarks

I. Status of claims

Claims 1-30 were pending.

Claim 31 has been added.

Claim 12 has been rewritten in independent form in response to the Examiner's indication that such a claim would be allowable.

II. Objections to the specification

The specification has been amended to include the suggestions made by the Examiner regarding the section headings.

The specification also has been amended to correct the typographical error on page 8, line 1, and to include reference number 74 in the description of FIG. 5.

The Examiner's objections to the specification now should be withdrawn.

III. Objections to the claims

The claims have been amended in ways that address the Examiner's objections to the claims, objections which now should be withdrawn.

IV. Claim rejections under 35 U.S.C. § 101

In the Office action dated October 6, 2006, the Examiner has rejected claim 30 under 35 U.S.C. § 101.

In a telephone conference on January 5, 2007, the Examiner indicated to the undersigned that he would withdraw the rejection of claim 30 under 35 U.S.C. § 101.

V. Claim rejections under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 3, 5-7, 14, 15, and 27 under 35 U.S.C. § 112, second paragraph.

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 11 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

Claims 3, 14, and 27 have been amended in ways that address the points raised by the Examiner. The § 112 second paragraph rejection of these claims now should be withdrawn. Claims 5-7 were rejected simply "because they are dependent on claim 3." Therefore, the rejection of claims 5-7 under 35 U.S.C. § 112, second paragraph, also should be withdrawn.

Regarding claim 15, it is noted that line 2 of the claim provides the antecedent basis for the recitation of "the given quantization process" in line 3. Therefore, the rejection of claim 15 under 35 U.S.C. § 112, second paragraph, should be withdrawn.

VI. Claim rejections under 35 U.S.C. § 103 - Part I

A. Claims 1-5, 8, 13, 15, 16, 18-21, and 28-30

The Examiner has rejected claims 1-5, 8, 13, 15, 16, 18-21, and 28-30 under 35 U.S.C. § 103(a) over Nosratinia ("Enhancement of JPEG-Compressed Images by Re-application of JPEG") in view of Hallapuro (U.S. 7,082,450) and Winger (U.S. 2004/0240556).

1. Claim 1

In Nosratinia's image enhancement process, the forward transforms are computed based on the DCT transform. Nosratinia does not teach or suggest "computing spatially-shifted forward transforms of the input image, each of the forward transforms being computed based on a denoiser transform Z having an associated transpose Z', wherein a matrix multiplication between Z and Z' produces a diagonal matrix Λ, Z=F(D), F specifies a nonlinear mapping from coefficients of D to coefficients of Z, and D substantially corresponds to a frequency-domain transform," as now recited in claim 1.[1]

The Examiner has stated that:

> However, Nosratinia does not disclose or fairly suggest for each of the claims 1 and 28-30 respectively exactly how each of the forward transforms are being computed based on a denoiser transform Z and how to denoise the forward transforms based on nonlinear mapping.

---

[1] The possibility noted by the Examiner "that F is just equal to D" is precluded because "F specifies a nonlinear mapping from coefficients of D to coefficients of Z."

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 12 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

The Examiner has relied on the teachings of Hallapuro to make-up for the perceived failings of Nosratinia to show "exactly how each of the forward transforms are being computed based on a denoiser transform Z." The Examiner has relied on the teachings of Winger to make-up for the perceived failings of Nosratinia to show "how to denoise the forward transforms based on nonlinear mapping."

Regarding Hallapuro, the Examiner has stated that:

> Hallapuro discloses how each of the forward transforms / desired transform matrix (col. 8, lines 51-53) are being computed based on a denoiser transform Z / A (col. 8, lines 51-53). The applicant describes the forward transform B is zxz.' and Hallapuro describes the desired transform matrix Y is AXA'. Note that the inverse transform would obviously be computed by inversing the above procedure, which is equivalent to what has been described by the applicant.

> Therefore, in view of Hallapuro, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nosratinia's method by including the computation of deriving the forward transforms by a denoiser transform Z in order to require less operations when the transform is applied to digital data.

Nosratinia does not teach or suggest anything about computing forward transforms based on a denoiser transform of the type defined in claim 1, where $Z=F(D)$ and F specifies a nonlinear mapping from coefficients of D to coefficients of Z.

Hallapuro only discloses that his approximations of the discrete cosine transform (DCT) are used for compression (see, e.g., col. 1, lines 5-12). Hallapuro does not teach or reasonably suggest anything that would have led one skilled in the art at the time the invention was made to substitute his DCT approximations for the DCT used by Nosratinia's denoising process to "reduce coding artifacts and enhance visual quality" of noisy images (see Nosratinia, abstract). Hallapuro does disclose that his approximations may "reduce the operations required for conventional DCT and IDCT while avoiding the necessity of non-trivial multiplications" and may "guarantee a high quality of the digital data after decompression" (see col. 5, lines 10-16). This disclosure, however, would not have led one skilled in the art to apply Hallapuro's DCT approximations to a non-compression-related application, such as Nosratinia's denoising

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 13 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

process, where they would serve an entirely different function. Indeed, in the image compression applications contemplated by Hallapuro the DCT approximations are applied to the image data only once, whereas Nosratinia's compression artifact reduction process involves an overcomplete representation of the input compressed image (using an overcomplete set of transforms) that has nothing whatsoever to do with image compression.

Thus, neither Nosratinia nor Hallapuro provides any suggestion or motivation to modify the references or combine the reference teachings in the manner proposed by the Examiner. Therefore, the Examiner has not met the first criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings...."). For at least this reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, and Winger now should be withdrawn.

In addition, the Examiner also has not met the second criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. ... Second, there must be a reasonable expectation of success. ..."). In particular, the Examiner has not explained how one skilled in the art would have had a reasonable expectation that incorporating Hallapuro's DCT approximations into Nosratinia's denoising process would have resulted in a denoising process that worked for its intended purpose (i.e., to "reduce coding artifacts and enhance visual quality" of noisy images; see Nosratinia, abstract). Indeed, both compression and compression artifact reduction involve complex, nonlinear processes whose practical results are hard to predict in advance. That is why compression and in compression artifact reduction processes must be tested empirically using test images before one reasonably can know whether the processes would work for their different respective intended purposes. In this regard, compression is concerned with making file sizes smaller (hence the discussions about rate-distortion), whereas compression artifact reduction is concerned with reducing the compression artifacts, which are measured using the PSNR (peak signal to noise ratio) -- there is no concept of rate-distortion.

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 14 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

For at least this additional reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, and Winger now should be withdrawn.

Regarding Winger, the Examiner has stated that (emphasis added):

> Winger discloses how to denoise the forward transforms based on nonlinear mapping / threshold (Fig. 5, page 3, col. [0034]) and the forward transforms are denoised by setting to zero each forward transform coefficient with an absolute value below a respective threshold derived from a respective quantization value linked to the input image and leaving unchanged each forward transform coefficient with an absolute equal to at least a respective threshold derived from a respective quantization value linked to the input image (Fig 5, page 3, col. [0034]) as recited in claim 16.

Contrary to the Examiner's statement, however, Winger does not set "to zero each forward transform coefficient with an absolute value below a respective threshold derived from a respective quantization value linked to the input image and leaving unchanged each forward transform coefficient with an absolute equal to at least a respective threshold derived from a respective quantization value linked to the input image." Instead, Winger sets "block coefficient values and the corresponding block-based measurement value SAVi to zero for blocks where the value of SAVi is less than a predetermined threshold..." where "the predetermined threshold used in setting the block coefficient values to zero may be based on a class of the block and/or a type of the macroblock containing the block..." (see ¶ 34). The class of the block or the type of the macroblock containing the block is not a "respective quantization value linked to the input image."

For at least this additional reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, and Winger now should be withdrawn. This rejection also should be withdrawn for the following additional reasons.

The Examiner's conclusion that it would have been obvious to modify the teachings of Nosratinia based on the teachings of Winger is based on the following rationale:

> Therefore, in view of Winger, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Nosratinia's method as modified by Hallapuro, by including a thresholding block to denoise the forward transform in

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 15 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

<u>order to reduce the white noise present and improve the rate-distortion.</u>

Nosratinia does not teach or suggest anything that would have led one skilled in the art to modify Nosratinia's denoising process to incorporate Winger's block thresholding process. Indeed, Nosratinia merely discloses that his process uses a standard JPEG quantizer.

Winger only discloses that his block thresholding process is used in video compression "for improving rate-distortion performance of a compression system through parallel coefficient cancellation in a transform..." (see ¶ 8). Winger does not teach or reasonably suggest anything that would have led one skilled in the art at the time the invention was made to substitute his block thresholding process for the JPEG quantizer used by Nosratinia's denoising process to "reduce coding artifacts and enhance visual quality" of noisy images (see Nosratinia, abstract). Winger does disclose that his block thresholding process may improve the rate-distortion performance of a video compression system (see, e.g., ¶ 1). This disclosure, however, would not have led one skilled in the art to apply Winger's block thresholding process to a non-compression-related application, such as Nosratinia's denoising process, where it would serve an entirely different function. Indeed, in the video compression applications contemplated by Winger the DCT approximations are applied to the image data only once, whereas Nosratinia's compression artifact reduction process involves an overcomplete representation of the input compressed image (using an overcomplete set of transforms) that has nothing whatsoever to do with video compression.

Thus, neither Nosratinia nor Winger provides any suggestion or motivation to modify the references or combine the reference teachings in the manner proposed by the Examiner. Therefore, the Examiner has not met the first criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings...."). For at least this additional reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, and Winger now should be withdrawn.

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed   : Oct. 29, 2003
Page   : 16 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

Furthermore, the Examiner also has not met the second criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. ... Second, there must be a reasonable expectation of success. ...."). In particular, the Examiner has not explained how one skilled in the art would have had a reasonable expectation that incorporating Winger's block thresholding process into Nosratinia's denoising process would have resulted in a denoising process that worked for its intended purpose (i.e., to "reduce coding artifacts and enhance visual quality" of noisy images; see Nosratinia, abstract). Indeed, both compression and compression artifact reduction involve complex, nonlinear processes whose practical results are hard to predict in advance. That is why compression and in compression artifact reduction processes must be tested empirically using test images before one reasonably can know whether the processes would work for their different respective intended purposes. In this regard, compression is concerned with making file sizes smaller (hence the discussions about rate-distortion), whereas compression artifact reduction is concerned with reducing the compression artifacts, which are measured using the PSNR (peak signal to noise ratio) -- there is no concept of rate-distortion. For at least this additional reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, and Winger now should be withdrawn.

2.   Claims 2-5, 8, 13, 15, 16, and 18-21

Each of claims 2-5, 8, 13, 15, 16, and 18-21 incorporates the features of independent claim 1 and therefore is patentable over Nosratinia, Hallapuro, and Winger for at least the same reasons explained above. Claims 8, 20 and 21 also are patentable over the cited references for the following additional reason.

a.   Claim 8

Claim 8 recites that "F is a mapping from coefficients of D to corresponding coefficients of Z having values selected from 0 and $\pm 2N$ where N has an integer value."

The Examiner has explained his basis for rejecting claim 8 as follows:

> Re Claim 8: Nosratinia discloses a quantizer Q which to one of
> ordinary skill in the art at the time the invention was made could

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 17 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

be considered as F, where F is a mapping from coefficients of D to corresponding coefficients of Z having values selected from 0 and $\pm 2N$ where N has an integer value because this type of quantizer is a typical quantizer used in many fields of endeavor.

Contrary to the Examiner's statement, however, the quantizer Q does not specify a nonlinear mapping from coefficients of D to coefficients of Z, where each of the forward transforms is computed based on Z, as recited in claim 1. In accordance with Nosratinia teachings, the forward transforms are computed before they are quantized by the quantizer blocks Q. Therefore, there is no basis for the Examiner's conclusion that one skilled in the art would have considered the quantizer Q to be F. Moreover, the quantizer Q does not specify a mapping from coefficients of the DCT transform to corresponding coefficients of a denoiser transform Z, which is used to compute spatially-shifted forward transforms of the input image as recited in claim 1.

In addition, the Examiner has not cited any support for his assertion that "this type of quantizer is a typical quantizer used in many fields of endeavor," nor has the Examiner he Examiner, however, has not explained where the motivation to modify Nosratinia's denoising process is found in any of the cited references or in the knowledge generally available at the time the invention was made (see MPEP § 706.02(j)). The Examiner is requested to cite prior art that supports his assertions regarding the knowledge that was generally available and that establishes the requisite motivation for modifying Nosratinia's teachings in the manner proposed by the Examiner. Alternatively, if the Examiner is aware of facts within his personal knowledge that provide the requisite factual basis and establish the requisite motivation to support his deemed conclusion that the features recited in claim 8 would have been obvious, the Examiner is requested to provide an affidavit in accordance with 37 CFR § 1.104(d)(2). Otherwise, the Examiner's rejection of claim 8 should be withdrawn for this additional reason.

b.　　Claim 20

Claim 20 recites that "computing the output image comprises computing a base image from a combination of inverse transforms."

In support of the rejection of claim 20, the Examiner has stated that:

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 18 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

Re Claim 20: Nosratinia discloses computing the output image comprises computing a base image/enhanced image from a combination of inverse transforms (FIG. 5, pages 71-73, section 3.1).

In this case, however, the base image/enhanced image relied upon by the Examiner is the same as the output image. Therefore, the Examiner impermissibly has relied on a single element of Nosratinia's disclosure (i.e., the output image) to meet two separate and distinct elements of claim 20 (i.e., the "output image" and the "base image"), effectively reading one of these claim elements out of the claim. For this additional reason, the Examiner has failed to establish a prima facie case of obviousness of claim 20 under 35 U.S.C. § 103(a) (see MPEP § 2143.03).

c.   Claim 21

Claim 21 depends from claim 20 and therefore is patentable over the cited references for at least the same additional reason described above.

3.   Claims 28-30

Each of independent claims 28-30 recites features that essentially track the pertinent features of independent claim 1 discussed above. Therefore, claims 28-30 are patentable over Nosratinia, Hallapuro, and Winger for at least the same reasons explained above in connection with claim 1.

B.   Claims 6, 7, and 9-11

The Examiner has rejected claims 6, 7, and 9-11 under 35 U.S.C. § 103(a) over Nosratinia in view of Hallapuro, Winger, and Malvar ("Low Complexity Transform and Quantization in H.264/AVC").

Each of claims 6, 7, and 9-11 incorporates the features of independent claim 1. Malvar does not make-up for the failure of Nosratinia, Hallapuro, and Winger to teach or suggest the inventive method defined in independent clam 1. Therefore, claims 6, 7, and 9-11 are patentable over Nosratinia, Hallapuro, Winger, and Malvar for at least the same reasons explained above.

Claims 6, 7, and 9-11 also are patentable over the cited references for the following additional reasons.

Nosratinia does not teach or suggest anything about computing forward transforms based on a denoiser transform of the type defined in any of claims 6, 7, and 9-11.

Malvar only discloses that the H.264 transforms are used for compression. Malvar does not teach or reasonably suggest anything that would have led one skilled in the art at the time the invention was made to substitute any of the H.264 transforms for the DCT used by Nosratinia's denoising process to "reduce coding artifacts and enhance visual quality" of noisy images (see Nosratinia, abstract). Malvar does disclose that his approximations may minimize computational complexity (see Malvar, abstract). This disclosure, however, would not have led one skilled in the art to apply the H.264 transforms to a non-compression-related application, such as Nosratinia's denoising process, where they would serve an entirely different function. Indeed, in the image compression applications contemplated by Malvar the H.264 transforms are applied to the image data only once, whereas Nosratinia's compression artifact reduction process involves an overcomplete representation of the input compressed image (using an overcomplete set of transforms) that has nothing whatsoever to do with image compression.

Thus, neither Nosratinia nor Malvar provides any suggestion or motivation to modify the references or combine the reference teachings in the manner proposed by the Examiner. Therefore, the Examiner has not met the first criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings...."). For at least this additional reason, the Examiner's rejection of claims 6, 7, and 9-11 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, Winger, and Malvar now should be withdrawn.

In addition, the Examiner also has not met the second criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. ... Second, there must be a reasonable expectation of success. ..."). In particular, the Examiner has not explained how one skilled in the art would have had a reasonable expectation that incorporating the H.264

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 20 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

transforms into Nosratinia's denoising process would have resulted in a denoising process that worked for its intended purpose (i.e., to "reduce coding artifacts and enhance visual quality" of noisy images; see Nosratinia, abstract). Indeed, both compression and compression artifact reduction involve complex, nonlinear processes whose practical results are hard to predict in advance. That is why compression and in compression artifact reduction processes must be tested empirically using test images before one reasonably can know whether the processes would work for their different respective intended purposes. In this regard, compression is concerned with making file sizes smaller, whereas compression artifact reduction is concerned with reducing the compression artifacts. For at least this additional reason, the Examiner's rejection of claims 6, 7, and 9-11 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, Winger, and Malvar should be withdrawn.

C.   Claim 14

The Examiner has rejected claim 14 under 35 U.S.C. § 103(a) over Nosratinia in view of Hallapuro, Winger, and Merhav (U.S. 6,472,534).

Claim 14 incorporates the features of independent claim 1. Merhav does not make-up for the failure of Nosratinia, Hallapuro, and Winger to teach or suggest the inventive method defined in independent clam 1. Therefore, claim 14 is patentable over Nosratinia, Hallapuro, Winger, and Merhav for at least the same reasons explained above.

Claim 14 also is patentable over the cited references for the following additional reasons.

Nosratinia does not teach or suggest anything about computing forward transforms based on a of a factorization of Z.

Merhav only discloses that his approximations of the discrete cosine transform (DCT) are used for compression (see, e.g., the title, col. 1, line 14, through col. 2, line 60, and col. 7, lines 31-35). Merhav does not teach or reasonably suggest anything that would have led one skilled in the art at the time the invention was made to substitute his DCT approximations for the DCT used by Nosratinia's denoising process to "reduce coding artifacts and enhance visual quality" of noisy images (see Nosratinia, abstract). In particular, Merhav's disclosure would not have led one skilled in the art to apply his DCT approximations to a non-compression-related application, such as Nosratinia's denoising process, where they would serve an entirely different function.

Indeed, in the image compression applications contemplated by Merhav the DCT approximations are applied to the image data only once, whereas Nosratinia's compression artifact reduction process involves an overcomplete representation of the input compressed image (using an overcomplete set of transforms) that has nothing whatsoever to do with image compression.

Thus, neither Nosratinia nor Merhav provides any suggestion or motivation to modify the references or combine the reference teachings in the manner proposed by the Examiner. Therefore, the Examiner has not met the first criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings...."). For at least this reason, the Examiner's rejection of claim 14 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, Winger, and Merhav now should be withdrawn.

In addition, the Examiner also has not met the second criterion required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 (see MPEP § 706.02(j): "To establish a prima facie case of obviousness, three basic criteria must be met. ... Second, there must be a reasonable expectation of success. ..."). In particular, the Examiner has not explained how one skilled in the art would have had a reasonable expectation that incorporating Merhav's DCT approximations into Nosratinia's denoising process would have resulted in a denoising process that worked for its intended purpose (i.e., to "reduce coding artifacts and enhance visual quality" of noisy images; see abstract). Indeed, both compression and compression artifact reduction involve complex, nonlinear processes whose practical results are hard to predict in advance. That is why compression and in compression artifact reduction processes must be tested empirically using test images before one reasonably can know whether the processes would work for their different respective intended purposes. In this regard, compression is concerned with making file sizes smaller, whereas compression artifact reduction is concerned with reducing the compression artifacts. For at least this additional reason, the Examiner's rejection of claim 14 under 35 U.S.C. § 103(a) over Nosratinia, Hallapuro, Winger, and Merhav now should be withdrawn.

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed : Oct. 29, 2003
Page : 22 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

VII.   Claim rejections under 35 U.S.C. § 103 - Part II

The Examiner has rejected claims 1, 2,4, 16, 17, and 20-30 under 35 U.S.C. § 103(a) over Samadani et al. (U.S. 2005/0078872).

The Examiner has noted that Samadani "has a common assignee and a common inventor with the instant application." The Statement of Common Ownership that is filed herewith establishes that the instant application and Samadani et al. were, at the time the invention of the instant application was made, owned by the same entity or subject to an obligation of assignment to the same entity. Therefore, Samadani et al. does not qualify as prior art in accordance with 35 U.S.C. § 103(c) (see MPEP § 706.02(l)(2)II).

For at least this reason, the Examiner's rejection of claims 1, 2, 4, 16, 17, and 20-30 under 35 U.S.C. § 103(a) over Samadani et al should be withdrawn.

VIII.   Double Patenting

The Examiner has rejected claims1, 2, 4, 16, 17, and 20-30 under the doctrine of obviousness-type double patenting over claims 1-13, 22, 23, and 45-46 of of U.S. Patent Application No. 10/683,322 in view of Hallapuro.

The Terminal Disclaimer being filed herewith should overcome this obviousness-type double patenting rejection.

IX.   Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Applicant : Ramin Samadani
Serial No. : 10/696,140
Filed   : Oct. 29, 2003
Page   : 23 of 23

Attorney's Docket No.: 200312926-1
Amendment dated Jan. 8, 2007
Reply to Office action dated Oct. 6, 2006

Respectfully submitted,

Date: January 8, 2007

Edouard Garcia
Reg. No. 38,461
Telephone No.: (650) 289-0904

Please direct all correspondence to:

Hewlett-Packard Company
Intellectual Property Administration
Legal Department, M/S 35
P.O. Box 272400
Fort Collins, CO 80528-9599